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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CANTELMO, GREGG

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,862

Applicant(s)

HOFFMAN ET AL.

Examiner

Gregg Cantelmo

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5, 17-21 and 28-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5, 17-21 and 28-37 is/are allowed.
- 6) ☒ Claim(s) 38-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. In response to the amendment received December 29, 2003:
 - a. Claims 2-5, 17-21 and 28-46 are pending. Claims 1, 16 and 27 have been cancelled as per the amendment;
 - b. The drawing objection has been withdrawn in light of the amendment;
 - c. The specification objection has been withdrawn in light of the amendment;
 - d. The 112 rejection has been withdrawn in light of the amendment;
 - e. The prior art rejections of record have been withdrawn in light of the amendment which incorporates the allowable subject matter indicated in the previous office action into independent form. New claims 38-42 also include the allowable subject matter as reasoned below. New claims 43-46 do not include the allowable subject matter and are subject to new grounds of rejection necessitated by amendment as set forth in this office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 38-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 38 recites the limitation "said battery cells" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. The first two lines of the claim recites "A battery cell ... configured to receive a plurality of said battery cells ...". There is no antecedent basis for a plurality of battery cells. The preamble of the claim is therefore unclear since it is not clear if the claimed invention is to the individual battery cell "for use" in a larger arrangement comprising plural battery cells or to the plural battery cell arrangement having a plurality of the battery cell as defined in the claim. For the record, the Examiner has given weight to the plural cell arrangement since the body of the claim recites sufficient structure for plural cells. This also applies to dependent claims 39-42 which include the limitations of base claim 38 and further to claim 43 and it's respective dependent claims 44-46 which recites the same inconsistency at lines 1-2.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 43-46 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 4,603,093 (Edwards).

Edwards discloses a battery cell, comprising: a battery cell structure 14 comprising a plurality of positive plates 28 each having a positive tab portion (i.e., a lug)

depending outwardly from a periphery, a plurality of negative plates 30 each having a negative tab portion (i.e., a lug) depending outwardly from a periphery, and a nonconductive separator 32 disposed in between said plurality of positive plates and said plurality of negative plates; the plates and separators being configured into a compressible stack (Figs. 2 and 5), a casing 14 for receiving the stack, the casing having an interior height smaller than an uncompressed height of the stack and a cover 12 mated with the casing 14 to "about" said height of the casing wherein the casing comprises guides 45 located in a sidewall which when connected to the electrode plates guide the placement of the battery cell within the battery (Figs. 2 and 5 as applied to claim 43).

With respect to the interior height of the casing as recited in claim 43, this is not limited to the terminal height of the casing and can be any height less than the height of the uncompressed stack, such as the height defined by the stack in a compressed state. In the case of Edwards the interior height which is smaller than the uncompressed stack (the uncompressed height being shown in Fig. 5) is the height of which the stack of Edwards is compressed to as shown in Fig. 2 (as applied to claim 43). See attached marked-up copies of Figs. 2 and 5 of Edwards.

With respect to the guides located in the sidewall, the slots or notches through which contact members 45 are disposed serve to position the tabs connected to bus bars 46 in a specific position. Thus these notches and bus bars formed in the casing sidewalls serve as guides for the particular placement of the bus bar 46 and tabs (tigs) connected to the bus bars as defined in Fig. 2 (as applied to claim 43). For example the

placement of such relative to the orientation of the cells leads one to have to guide the cells into the casing in a manner which effectively aligns the tabs (tigs) and bus bars with the contact member 45. See attached marked-up copies of Figs. 2 and 3 of Edwards.

The cover provides a compressive force to the stack of battery elements (Figs. 2 and 5 as applied to claim 43).

The contact members 45 disposed in the slots in the sidewalls are configured to mate with the bus bars 46 and tabs (tigs) of the battery (Fig. 2 as applied to claim 44).

The contact members 45 are disposed in notches or slots as shown in Figs. 2 and 3. The degree to which the terms notch and slot are recited in the claims are absent sufficient specificity to structurally differentiate the two terms. Thus given it's broadest, reasonable interpretation, the openings 45 are held to read on both a notch configuration and a slot configuration (as applied to claims 45 and 46).

Allowable Subject Matter

7. Claims 2-5, 17-21 and 28-37 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record are considered to teach, suggest or render obvious the inventions of claims 21, 32 and their respective dependent claims.

Claim 21 recites the battery cell as defined therein including a first slot for receiving said plurality of positive lugs, said first slot being offset from a first side of said casing by a first predetermined distance and said positive lugs being offset a distance

corresponding to said first predetermined distance; and a second slot for receiving said plurality of negative lugs, said second slot being offset from a second side of said casing by a second predetermined distance and said negative lugs being offset a distance corresponding to said second predetermined distance, said first predetermined distance being different than said second predetermined distance.

Claim 32 recites the battery cell as defined therein including said positive lug alignment opening is offset from a first side of said battery cell structure by a first predetermined distance and said positive lugs being offset a distance corresponding to said first predetermined distance', and said negative lug alignment opening being offset from said first side of said body by a second predetermined distance and said negative lugs being offset a distance corresponding to said second predetermined distance, said first predetermined distance being different from said second predetermined distance.

The prior art of record teaches of positioning the positive and negative terminals at the same predetermined distance from the sides of the battery. There is no apparent teaching or suggestion by the prior art of record for offsetting the first and second alignment openings for receiving positive and negative lugs, respectively, as recited in claims 21, 32 and 38. The instant application teaches that providing this arrangement prevents the positive lugs from being inadvertently fitted into the negative alignment openings since the offset slots prevent alignment of the positive lugs into the negative alignment openings, and vice versa (see paragraph bridging pages 7 and 8 of the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Claim 38 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

9. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record are considered to teach, suggest or render obvious the inventions of claims 38 and its respective dependent claims.

Claim 38 recites the battery as defined therein including said end walls being disposed between said pair of side walls; and a cover configured to engage said pair of side walls and said pair of end walls, one of said pair of end walls having a positive lug opening and a negative lug opening wherein said positive lugs and said negative lugs are positioned to be secured to a plurality of positive lugs and a plurality of negative lugs of another battery cell, said positive lug opening being offset a first distance from one of said pair of side walls and said negative lug opening being offset a second distance from the other one of said pair of side walls, said first distance not equal to said second distance.

The prior art of record teaches of positioning the positive and negative terminals at the same predetermined distance from the sides of the battery. There is no apparent teaching or suggestion by the prior art of record for offsetting the first and second alignment openings for receiving positive and negative lugs, respectively, as recited in

claims 21, 32 and 38. The instant application teaches that providing this arrangement prevents the positive lugs from being inadvertently fitted into the negative alignment openings since the offset slots prevent alignment of the positive lugs into the negative alignment openings, and vice versa (see paragraph bridging pages 7 and 8 of the instant application.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday through Thursday from 8:00

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a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached at (571) 272-1292. FAX communications should be sent to FAX number: (703) 872-9306. FAXES received after 4 p.m. will not be processed until the following business day. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

Gregg Cantelmo
Patent Examiner
Art Unit 1745

gc



January 6, 2004

Additional pages 10 AND 11
Attached marked-up figures
of U.S. Patent No. 4,603,093

Gregg Cantelmo 1/6/04